SITE:	Precautionary Area Outside San Francisco Bay	LATITUDE:	37-46.0
HAZARD:	Vessel Navigation	LONGITUDE:	122-22.9
VOLUME:	300,000 bbl		
DURATION:	3 days		

TRAJECTORY ANALYSIS

A spill trajectory envelope was calculated for the vessel navigation hazard area just outside of San Francisco Bay. The trajectory analysis considered oil transport by the wind and tidal currents, and spreading of the oil spill by physical processes such as gravity, surface tension, and tidal dispersion. Spill transport occurring on an ebbing tide would transport the oil away from the Precautionary Area to the north, south, and west. A spill during the flood tide would transport the oil through the Golden Gate and northward and southward within San Francisco Bay. A spill occurring over the entire flood tide would reach Richmond Harbor to the north and to Oakland Harbor to the south. Physical spreading of the spill over the initial 6-hour time period would move the oil an additional 2 miles.

Wind-induced surface currents could cause additional transport of oil depending on the direction, strength, and persistence of local winds. Northerly winds, combined with physical spreading, could transport the oil into South San Francisco Bay past the San Mateo Bridge. Within 3 days, westerly and southwesterly winds could carry oil across San Pablo Bay to approximately the Carquinez Bridge.

Oil not entering San Francisco Bay would be expected to be transported either southward or northward along the coast depending on the direction of the wind. For oil that is transported outside the Bay, northerly winds could transport the oil as far as Point Montara after 3 days. Southerly winds outside the Bay could transport the oil northward as far as Point Reyes after 3 days.

These spill trajectory envelopes represent the outer perimeter of shoreside areas that could receive oil in the event of any spill. The envelopes are based on regional extremes of climate, tide, current, and wind and assume pessimistic dispersion and other adverse weather conditions. These trajectory envelopes do not represent the trajectory of any one spill. A full discussion of the details used for preparing these spill envelopes is provided in Section 202.2.